



SUN3 siRNA (m): sc-153931

BACKGROUND

SUN3 (Sad1 and UNC84 domain-containing protein 3), also known as SUNC1, is a 357 amino acid single pass membrane protein that contains one SUN domain and exists as two alternatively spliced isoforms. The gene that encodes SUN3 contains 41,972 bases and maps to human chromosome 7p12.3. Chromosome 7 is about 158 million bases long, encodes over 1,000 genes and makes up about 5% of the human genome. Chromosome 7 has been linked to osteogenesis imperfecta, pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome. The deletion of a portion of the q arm of chromosome 7 is associated with Williams-Beuren syndrome, a condition characterized by mild mental retardation, an unusual comfort and friendliness with strangers and an elfin appearance. Deletions of portions of the q arm of chromosome 7 are also seen in a number of myeloid disorders including cases of acute myelogenous leukemia and myelodysplasia.

REFERENCES

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2. Liang, H., et al. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. *Proc. Natl. Acad. Sci. USA* 95: 3781-3785.
3. Iwasaki, S., et al. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. *Arch. Otolaryngol. Head Neck Surg.* 127: 705-708.
4. Osborne, L.R., et al. 2006. Williams-Beuren syndrome diagnosis using fluorescence *in situ* hybridization. *Methods Mol. Med.* 126: 113-128.
5. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. *Neuromolecular Med.* 8: 547-565.
6. Gilbert-Dussardier, B. 2006. Williams-Beuren syndrome. *Rev. Prat.* 56: 2102-2106.
7. Leone, G., et al. 2007. Therapy-related leukemia and myelodysplasia: susceptibility and incidence. *Haematologica* 92: 1389-1398.
8. Jiang, X.Z., et al. 2011. SPAG4L, a novel nuclear envelope protein involved in the meiotic stage of spermatogenesis. *DNA Cell Biol.* 30: 875-882.

CHROMOSOMAL LOCATION

Genetic locus: Sun3 (mouse) mapping to 11 A1.

PRODUCT

SUN3 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SUN3 shRNA Plasmid (m): sc-153931-SH and SUN3 shRNA (m) Lentiviral Particles: sc-153931-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SUN3 siRNA (m) is recommended for the inhibition of SUN3 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SUN3 gene expression knockdown using RT-PCR Primer: SUN3 (m)-PR: sc-153931-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Kawamoto, M., et al. 2018. The novel selective pan-TRK inhibitor ONO-7579 exhibits antitumor efficacy against human gallbladder cancer *in vitro*. *Anticancer Res.* 38: 1979-1986.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.